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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,065

06/29/2005

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124507

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EXAMINER

BALDWIN, GORDON

ART UNIT

PAPER NUMBER

1775

MAIL DATE

DELIVERY MODE

09/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,065	HIRAI ET AL.	
	Examiner	Art Unit	
	Gordon R. Baldwin	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-35 is/are pending in the application.
- 4a) Of the above claim(s) 29-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20050629</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of group I claims 17-28 in the reply filed on 7/18/2007 is acknowledged. The traversal is on the ground(s) that a serious burden does not exist to examining the entire claim set. This is not found persuasive because the traversal is on the grounds that there is no undue burden in examining both the group I and group II claims. Applicants further argue that the groups of claims are not so unrelated as would require a burden beyond that of the normal burdens of examination. This argument has been considered, but not found persuasive. MPEP § 808.02 recites that for the purposes of the initial requirement of a restriction, a serious burden on the examiner may be prima facie shown if the examiner shows by appropriate explanation either separate classification, separate status in the art, or a different field of search as defined in MPEP § 808.02. Since the Examiner has shown a different classification for the two groups of claims, a burden for examining both groups has been shown.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-25 rejected under 35 U.S.C. 102(b) as being anticipated by Kotani (U. S. Pat. No. 5,629,067).

Consider claims 17-21, Kotani teaches a ceramic honeycomb structure that utilizes a cordierite powder coating material (with cordierite being the main component) where the average particle size of the cordierite is less than 50 μm . (Col. 7 lines 9-15 and lines 37-52) This teaching is considered to encompass the limitation of an average particle diameter of the cordierite powder being between 20 μm and 55 μm with 80% of the particles being 44 μm or less. Therefore Kotani is considered to be valid prior art reference because it teaches a range within, overlapping, or touching the claimed range and is considered to anticipate if the prior art range discloses the claimed range with sufficient specificity. See MPEP 2131.03 and Ex parte Lee, 31 USPQ2d 1105 (Bd. Pat. App. & Inter. 1993). Kotani also teaches the use of water with this mixture (Col. 9 lines 20-25)

As for the tap bulk density, since Kotani specifically teaches that the coating layer has a main component of a cordierite powder, in a particle size overlapping that of the instant claims, in addition to teaching that the bulk density can be varied by adjusting the wall thickness or increasing the open porosity, Kotani is expected to possess similar characteristics, such as the tap bulk density. It has been held that where the claimed and prior art products are identical or substantially identical in structure or are produced by identical or a substantially identical processes, a prima facie case of either anticipation or obviousness will be considered to have been established over functional limitations that stem from the claimed structure. *In re Best*, 195 USPQ 430, 433 (CCPA

1977), *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The ***prima facie*** case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed products. *In re Best*, 195 USPQ 430, 433 (CCPA 1977).

Consider claims 22 and 23, Kotani teaches that the coating material for the outer wall can also contain ceramic fibers. (Col. 4 lines 5-10)

Consider claims 24 and 25, Kotani teaches that the outer coating of the honeycomb structure (16) thus formed on the outer surface of the honeycomb body (14) is then dried and fired as needed depending on the coating (which is considered to be a cordierite based coating as taught in the Kotani reference). (Col. 8 lines 30-40) Additionally, this drying and firing limitation is considered to be a product-by-process limitation and “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.”, (*In re Thorpe*, 227 USPQ 964,966). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product (*In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotani (U. S. Pat. No. 5,629,067) in further view of Kato (U.S. Pat. No. 6,764,743).

Consider claims 26-28, Kotani teaches a ceramic honeycomb structure that utilizes a cordierite powder coating material (as described in the aforementioned rejection).

However, Kotani does not specifically state that the surface roughness of the outer wall is in the range of 5-50 μ m. Kato teaches that the outer wall of a honeycomb

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structure can be made of cordierite where the outer wall surface roughness can be between 0.5 μ m and 10 μ m, which overlaps the claimed range of the applicant. (Col. 9 lines 15-25 and Col. 5 lines 40-55) The reason Kato uses such a range for the roughness is because this structure assists in increasing the purification ability, erosion resistance and improving the canning ability of the honeycomb structure which is used as a carrier for catalyst in a purification system for exhaust gas. (Col. 2 lines 25-33)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the cordierite coated honeycomb structure of Kotani with the cordierite coated honeycomb structure with a specific outer wall roughness range in Kato to produce a honeycomb structure with increased purification ability, erosion resistance and improved canning ability.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon R. Baldwin whose telephone number is (571)272-5166. The examiner can normally be reached on M-F 7:45-5:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GRB



JENNIFER C. MCNEIL
SUPERVISORY PATENT EXAMINER

9/4/7